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10/691,580

10/24/2003

Atsushi Ueda

AIS-0010

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05/03/2005

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EXAMINER

HAILEY, PATRICIA L

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,580

Applicant(s)

UEDA ET AL.

Examiner

Patricia L. Hailey

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1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4,7,8,10,12-14,16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 4, 7, 8, 10, 12-14, 16, and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/21/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Applicants' remarks and amendments, filed on February 3, 2005, have been carefully considered. In the amendments, claims 1, 2, 5, 6, 9, 11, 15, and 17 have been canceled, and new claim 18 has been added.

Claims 3, 4, 7, 8, 10, 12-14, 16, and 18 are now pending in this application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document was filed on October 24, 2003.

Specification

2. ***The disclosure is objected to because of the following informalities:***

On page 15 of the Specification, in line 14, the word "last" should be "least" (i.e., "at least one component", emphasis added).

Appropriate correction is required.

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Withdrawn Objections and Rejections

The objection to claim 15 stated in the previous Office Action has been withdrawn in view of Applicants' cancellation of this claim.

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The 112(2) rejection of claim 13 stated in the previous Office Action has been withdrawn in view of Applicants' amendment to this claim.

The 102(b) rejection of claims 1, 2, 9, 13, and 15 as being anticipated by Taylor et al. (U. S. Patent No. 5,041,195) stated in the previous Office Action has been withdrawn in view of Applicants' cancellation of claims 1, 2, 9, and 15.

The 103(a) rejection of claims 3-8, 10-12, 14, 16, and 17 as being unpatentable over Taylor et al. (U. S. Patent No. 5,041,195) stated in the previous Office Action has been withdrawn in view of Applicants' amendments to claims 3, 4, 7, 8, and 16. Taylor et al. do not teach or reasonably suggest the presence of indium, gallium, or oxides of these metals.

The 102(b)/103(a) rejection of claims 1-17 as being anticipated by or, in the alternative, as being unpatentable over Starz et al. (U. S. Patent Publication No. 2002/0034675) stated in the previous Office Action has been withdrawn in view of Applicants' amendments. Starz et al. do not teach or reasonably suggest the presence of indium, gallium, or oxides of these metals.

New Ground of Rejection

The following New Ground of Rejection is being made in view of the newly discovered prior art, Alfenaar et al. (U. S. Patent No. 4,127,648).

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

5. *Claims 3, 4, 7, 8, 10, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Alfenaar et al. (U. S. Patent No. 4,127,648).*

With respect to the claims:

Alfenaar et al. teach metal electrodes (useful as the anode in a fuel cell, see col. 5, lines 22-27—thus reading upon the claim limitation “anode catalyst for a fuel cell”, e.g., as recited in claims 3 and 14, as well as the limitation “fuel cell comprising the anode catalyst”, as recited in claim 13) wherein the metal is in a finely-divided or porous state (considered to read upon the limitation “fine particles”). The metal of the electrode is in the form of a metallic alloy, the constituents of which include a basis-metal and at least one alloying element. See col. 1, lines 58-64 of Alfenaar et al.

The basis metal electrode is contacted with a solution of a suitable compound of the alloying element and, in situ, the compound is reduced, the alloying element thereby forming an alloy with the basis-metal. The alloying effect may take place throughout the body of the electrode, or only on the surface thereof. See col. 2, lines 2-24 of Alfenaar et al.

Any metal or alloy suitable for use as an electrode may be used as a basis-metal. Examples of these include metals from Groups VIII, IB, and IIB, i.e., ruthenium, rhodium, palladium, osmium, iridium, platinum, silver, and gold (thus reading upon claims 7 and 8). Additionally, the basis-metal may be present in the basis-metal electrode in a finely divided state, in combination with a carrier material such as electrically conductive carbon (which reads upon claims 10 and 12). See col. 2, lines 25-43 of Alfenaar et al.

Alfenaar et al. at col. 2, lines 48-59 disclose exemplary embodiments wherein the basis-metal may be, inter alia, present as a component of an electrode comprising a hydrophobic porous element coated on one side with bonded porous carrier material (e.g., electrically conductive materials such as carbon) carrying finely-divided electrode metal. This disclosure is considered to read upon the limitation "coated on a conductive support".

Examples of the alloying elements include metals such as gold, gallium, and indium. See col. 3, lines 8-18 of Alfenaar et al., especially lines 15 and 16 (thus reading upon claims 3 and 4). Note that this disclosure also discloses the same metals suitable as basis-metals (ruthenium, rhodium, palladium, osmium, iridium, platinum, and silver).

In view of these teachings, Alfenaar et al. anticipate claims 3, 4, 7, 8, 10, and 12-14.

Claim Rejections - 35 USC § 103

6. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alfenaar et al. (U. S. Patent No. 4,127,648).

Alfenaar et al. is relied upon for its teachings in the above 102(b) rejection. Although Alfenaar et al. do not provide any specific examples of an anode catalyst comprising gold particles and either gallium, indium, or oxides thereof, one of ordinary skill in the art would, based on the teachings of Alfenaar et al., reasonably expect to select from the suitable components for both the basis-metal electrode and the alloying elements, and obtain Applicants' claimed invention. The subject matter as a whole would have been obvious to one having

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ordinary skill in the art at the time the invention was made, since it has been held to be within the general skill of a worker in the art to select a material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 U.S.P.Q 416.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

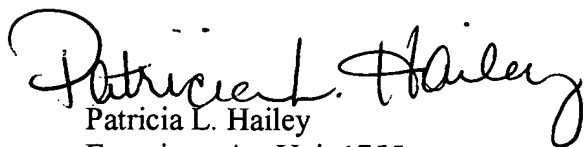
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patricia L. Hailey
Examiner, Art Unit 1755
April 20, 2005



J. A. LORENZO
SUPERVISORY PATENT EXAMINER